

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as indicated hereafter. It is believed that the following amendments and additions add no new matter to the present application.

In the Specification:

Please substitute the following amended for original paragraphs [0037] and [0040]:

[0037] FIG. 3A shows a simplified cross section of one embodiment of the invention. A P doped substrate 108 with typical doping concentration of between 1E14 and 1E16 atoms/cm.^{sup.3} (a/cm.^{sup.3}) contains an N-well 110 with a typical dopantdependent concentration between 1E16 and 1E18 a/cm.^{sup.3}. The N-well 110 is bounded at and near the surface by shallow trench isolation (STI) element 112A, typically between 0.2 to 1 um wide and 0.4 to 2 um deep. The STI element 112A is filled with a dielectric, typically silicon oxide (SiO.₂). Within the N-well 110 region are a N+ 116 and P+ 118 contact regions, with typical dopantdependent concentrations of between 1E19 and 1E21 a/cm.^{sup.3}. The N+ region 116 is bounded on the side away from the P+ contact region 118 by the STI 112A. The substrate 110 has N+ contact 120 and P+ contact 122, with a typical dopantdependent concentration of between 1E19 and 1E21 a/cm.^{sup.3} of donor and receptor dopantdependent respectively. The outside edge of substrate P+ contact 122 is bounded by STI clement 112E. A PN junction is formed between N+ contact region 120 and P doped substrate 108 while another PN junction is formed between P+ contact region 118 and the N-well region 110, as shown in Fig. 3A.

[0040] The RPO layer enables the proper device salicide processing without having to use the STI elements of prior art. As previously discussed, the STI elements can be detrimental to the ESD protection capability of the device by reducing the parasitic bipolar current gain, beta, (.beta.), and can also reduce lateral heat transfer capability. Because of the RPO layer is formed on N+ contact region 120 and P+ contact region 118, the top surfaces of the two related PN junction have no salicide thereon, thereby avoiding reduction of the parasitic bipolar current gain.